

REMARKS

In the action dated June 27, 2002, the Examiner rejected the then pending claims as obvious over Sand in view of Makower, stating:

Sand ('709) teaches a device for shrinking collagen with thermal feedback. Makower et al teach a device for heating tissue with microwaves or electrical resistance and with temperature sensors located on an insulator. It would have been obvious to the artisan of ordinary skill to employ a device as taught by Makower et al in the device of Sand ('709), since Sand ('709) teach no particular configuration of the device for shrinking non-corneal collagen, thus producing a device such as claimed.

New claims 74, 82, and 89, the currently pending independent claims, each recite "a sensor embedded within the thermally conductive material" for "producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of the collagen containing tissue and from a [or the] fluid medium." Among other advantages, embedding a sensor within thermally conductive material increases the effective surface area of the sensor, allowing a high energy content in a fluid medium to be detected and undesired tissue heating, or reheating, to be reduced (see, e.g., pages 18-21 of the specification).

Neither Sand nor Makower et al. describes or suggests at least the claimed "sensor embedded within the thermally conductive material." As recognized by the Examiner, Sand does not describe a particular configuration for a device for collagen treatment, and thus clearly does not describe or suggest the sensor as claimed. Even if it were proper to combine Sand with Makower et al., which is not conceded, Makower et al. also does not describe or suggest the claimed "sensor embedded within the thermally conductive material." At most, Makower et al. describes a temperature sensing device 46 on or along an outer sheath 82 of a cannula 12, for example, as opposed to embedding a sensor within a thermally conductive material as claimed. Makower et al. also fails to recognize the advantages of embedding a sensor within thermally conductive material.

Therefore, applicant submits that the claims are patentable over Sand in view of Makower et al. for at least the reasons discussed above.

Applicant : Hugh Sharkey and Gary S. Fanton  
Serial No. : 08/714,987  
Filed : September 17, 1996  
Page : 7

Attorney's Docket No.: 14170-014001

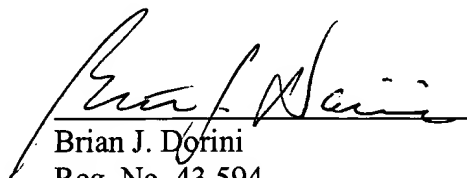
Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be examined. Please apply any charges or credits to

Deposit Account No. 06-1050.

Respectfully submitted,

Date: SEPTEMBER 17, 2002

  
\_\_\_\_\_  
Brian J. Dorini  
Reg. No. 43,594

Fish & Richardson P.C.  
1425 K Street, N.W.  
11th Floor  
Washington, DC 20005-3500  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331

**Version with markings to show changes made**

**In the claims:**

Claims 45-47, 49, 51 and 52 have been cancelled without prejudice.

48. (Amended) The apparatus of claim [47] 74, further comprising:

[an electrical insulator positioned at least partially around an exterior surface of the energy delivery device; and]

a thermal insulator positioned at least partially around an exterior surface of the energy delivery device.

50. (Amended) The apparatus of claim [47] 74, further comprising:

a thermally conductive material coupling the sensor to an exterior surface of the distal portion.

53. (Amended) The apparatus of claim [47] 74, wherein the energy delivery device is an RF energy delivery device coupled to an RF energy source.

54. (Amended) The apparatus of claim [47] 74, wherein the energy delivery device is a resistive heating element coupled to a resistive heating source.

55. (Amended) The apparatus of claim [47] 74, wherein the energy delivery device is a microwave probe coupled to a microwave source.